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Sequence Listing was accepted.

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217-9197 (toll free).

Reviewer: Keisha Douglas

Timestamp: [year=2008; month=6; day=20; hr=11; min=14; sec=55; ms=713; ]

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Application No: 10540612 Version No: 2.0

**Input Set:****Output Set:**

**Started:** 2008-05-30 13:46:50.561  
**Finished:** 2008-05-30 13:46:52.292  
**Elapsed:** 0 hr(s) 0 min(s) 1 sec(s) 731 ms  
**Total Warnings:** 23  
**Total Errors:** 0  
**No. of SeqIDs Defined:** 24  
**Actual SeqID Count:** 24

| Error code | Error Description                                   |
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| W 213      | Artificial or Unknown found in <213> in SEQ ID (3)  |
| W 213      | Artificial or Unknown found in <213> in SEQ ID (4)  |
| W 213      | Artificial or Unknown found in <213> in SEQ ID (5)  |
| W 213      | Artificial or Unknown found in <213> in SEQ ID (6)  |
| W 213      | Artificial or Unknown found in <213> in SEQ ID (7)  |
| W 213      | Artificial or Unknown found in <213> in SEQ ID (8)  |
| W 213      | Artificial or Unknown found in <213> in SEQ ID (9)  |
| W 213      | Artificial or Unknown found in <213> in SEQ ID (10) |
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| W 213      | Artificial or Unknown found in <213> in SEQ ID (12) |
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| W 213      | Artificial or Unknown found in <213> in SEQ ID (15) |
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| W 213      | Artificial or Unknown found in <213> in SEQ ID (17) |
| W 213      | Artificial or Unknown found in <213> in SEQ ID (18) |
| W 213      | Artificial or Unknown found in <213> in SEQ ID (19) |
| W 213      | Artificial or Unknown found in <213> in SEQ ID (20) |
| W 213      | Artificial or Unknown found in <213> in SEQ ID (21) |

**Input Set:**

**Output Set:**

**Started:** 2008-05-30 13:46:50.561  
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**No. of SeqIDs Defined:** 24  
**Actual SeqID Count:** 24

Error code

Error Description

This error has occurred more than 20 times, will not be displayed

# SEQUENCE LISTING

<110> FARNEGARDH, MATHIAS  
 BONN, TORNAS  
 SUN, SHERRY  
 LJUNGGREN, JAN  
 AHOLA, HARRI  
 CARLQUIST, MATS

<120> PROTEIN CRYSTAL

<130> 041US1

<140> 10540612

<141> 2006-07-24

<150> PCT/IB03/06412

<151> 2003-12-24

<150> GB 0230177.8

<151> 2002-12-24

<160> 24

<170> PatentIn Ver. 3.3

<210> 1

<211> 461

<212> PRT

<213> Homo sapiens

<400> 1

Met Ser Ser Pro Thr Thr Ser Ser Leu Asp Thr Pro Leu Pro Gly Asn  
 1 5 10 15

Gly Pro Pro Gln Pro Gly Ala Pro Ser Ser Ser Pro Thr Val Lys Glu  
 20 25 30

Glu Gly Pro Glu Pro Trp Pro Gly Gly Pro Asp Pro Asp Val Pro Gly  
 35 40 45

Thr Asp Glu Ala Ser Ser Ala Cys Ser Thr Asp Trp Val Ile Pro Asp  
 50 55 60

Pro Glu Glu Glu Pro Glu Arg Lys Arg Lys Lys Gly Pro Ala Pro Lys  
 65 70 75 80

Met Leu Gly His Glu Leu Cys Arg Val Cys Gly Asp Lys Ala Ser Gly  
 85 90 95

Phe His Tyr Asn Val Leu Ser Cys Glu Gly Cys Lys Gly Phe Phe Arg  
 100 105 110

Arg Ser Val Val Arg Gly Gly Ala Arg Arg Tyr Ala Cys Arg Gly Gly  
 115 120 125

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |         |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---------|
| Gly | Thr | Cys | Gln | Met | Asp | Ala | Phe | Met | Arg | Arg | Lys | Cys | Gln | Gln | Cys | 130 | 135 | 140     |
| Arg | Leu | Arg | Lys | Cys | Lys | Glu | Ala | Gly | Met | Arg | Glu | Gln | Cys | Val | Leu | 145 | 150 | 155 160 |
| Ser | Glu | Glu | Gln | Ile | Arg | Lys | Lys | Lys | Ile | Arg | Lys | Gln | Gln | Gln | Gln | 165 | 170 | 175     |
| Glu | Ser | Gln | Ser | Gln | Ser | Gln | Ser | Pro | Val | Gly | Pro | Gln | Gly | Ser | Ser | 180 | 185 | 190     |
| Ser | Ser | Ala | Ser | Gly | Pro | Gly | Ala | Ser | Pro | Gly | Gly | Ser | Glu | Ala | Gly | 195 | 200 | 205     |
| Ser | Gln | Gly | Ser | Gly | Glu | Gly | Glu | Gly | Val | Gln | Leu | Thr | Ala | Ala | Gln | 210 | 215 | 220     |
| Glu | Leu | Met | Ile | Gln | Gln | Leu | Val | Ala | Ala | Gln | Leu | Gln | Cys | Asn | Lys | 225 | 230 | 235 240 |
| Arg | Ser | Phe | Ser | Asp | Gln | Pro | Lys | Val | Thr | Pro | Trp | Pro | Leu | Gly | Ala | 245 | 250 | 255     |
| Asp | Pro | Gln | Ser | Arg | Asp | Ala | Arg | Gln | Gln | Arg | Phe | Ala | His | Phe | Thr | 260 | 265 | 270     |
| Glu | Leu | Ala | Ile | Ile | Ser | Val | Gln | Glu | Ile | Val | Asp | Phe | Ala | Lys | Gln | 275 | 280 | 285     |
| Val | Pro | Gly | Phe | Leu | Gln | Leu | Gly | Arg | Glu | Asp | Gln | Ile | Ala | Leu | Leu | 290 | 295 | 300     |
| Lys | Ala | Ser | Thr | Ile | Glu | Ile | Met | Leu | Leu | Glu | Thr | Ala | Arg | Arg | Tyr | 305 | 310 | 315 320 |
| Asn | His | Glu | Thr | Glu | Cys | Ile | Thr | Phe | Leu | Lys | Asp | Phe | Thr | Tyr | Ser | 325 | 330 | 335     |
| Lys | Asp | Asp | Phe | His | Arg | Ala | Gly | Leu | Gln | Val | Glu | Phe | Ile | Asn | Pro | 340 | 345 | 350     |
| Ile | Phe | Glu | Phe | Ser | Arg | Ala | Met | Arg | Arg | Leu | Gly | Leu | Asp | Asp | Ala | 355 | 360 | 365     |
| Glu | Tyr | Ala | Leu | Leu | Ile | Ala | Ile | Asn | Ile | Phe | Ser | Ala | Asp | Arg | Pro | 370 | 375 | 380     |
| Asn | Val | Gln | Glu | Pro | Gly | Arg | Val | Glu | Ala | Leu | Gln | Gln | Pro | Tyr | Val | 385 | 390 | 395 400 |
| Glu | Ala | Leu | Leu | Ser | Tyr | Thr | Arg | Ile | Lys | Arg | Pro | Gln | Asp | Gln | Leu | 405 | 410 | 415     |
| Arg | Phe | Pro | Arg | Met | Leu | Met | Lys | Leu | Val | Ser | Leu | Arg | Thr | Leu | Ser | 420 | 425 | 430     |

Ser Val His Ser Glu Gln Val Phe Ala Leu Arg Leu Gln Asp Lys Lys  
435 440 445

Leu Pro Pro Leu Leu Ser Glu Ile Trp Asp Val His Glu  
450 455 460

<210> 2

<211> 208

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
construct

<400> 2

Gly Ser His Met Gly Glu Gly Glu Gly Val Gln Leu Thr Ala Ala Gln  
1 5 10 15

Glu Leu Met Ile Gln Gln Leu Val Ala Ala Gln Leu Gln Cys Asn Lys  
20 25 30

Arg Ser Phe Ser Asp Gln Pro Lys Val Thr Pro Trp Pro Leu Gly Ala  
35 40 45

Asp Pro Gln Ser Arg Asp Ala Arg Gln Gln Arg Phe Ala His Phe Thr  
50 55 60

Glu Leu Ala Ile Ile Ser Val Gln Glu Ile Val Asp Phe Ala Lys Gln  
65 70 75 80

Val Pro Gly Phe Leu Gln Leu Gly Arg Glu Asp Gln Ile Ala Leu Leu  
85 90 95

Lys Ala Ser Thr Ile Glu Ile Met Leu Leu Glu Thr Ala Arg Arg Tyr  
100 105 110

Asn His Glu Thr Glu Cys Ile Thr Phe Leu Lys Asp Phe Thr Tyr Ser  
115 120 125

Lys Asp Asp Phe His Arg Ala Gly Leu Gln Val Glu Phe Ile Asn Pro  
130 135 140

Ile Phe Glu Phe Ser Arg Ala Met Arg Arg Leu Gly Leu Asp Asp Ala  
145 150 155 160

Glu Tyr Ala Leu Leu Ile Ala Ile Asn Ile Phe Ser Ala Asp Arg Pro  
165 170 175

Asn Val Gln Glu Pro Gly Arg Val Glu Ala Leu Gln Gln Pro Tyr Val  
180 185 190

Glu Ala Leu Leu Ser Tyr Thr Arg Ile Lys Arg Pro Gln Asp Gln Leu  
195 200 205

<210> 3  
 <211> 23  
 <212> PRT  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence: Synthetic  
 construct  
  
 <400> 3  
 Leu Thr Ala Ala Gln Glu Leu Met Ile Gln Gln Leu Val Ala Ala Gln  
 1 5 10 15  
  
 Leu Gln Cys Asn Lys Arg Ser  
 20  
  
 <210> 4  
 <211> 7  
 <212> PRT  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence: Synthetic  
 construct  
  
 <400> 4  
 Pro Lys Val Thr Pro Trp Pro  
 1 5  
  
 <210> 5  
 <211> 202  
 <212> PRT  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence: Synthetic  
 construct  
  
 <400> 5  
 Ala Ala Ala Asp Ala Arg Gln Gln Arg Phe Ala His Phe Thr Glu Leu  
 1 5 10 15  
  
 Ala Ile Ile Ser Val Gln Glu Ile Val Asp Phe Ala Lys Gln Val Pro  
 20 25 30  
  
 Gly Phe Leu Gln Leu Gly Arg Glu Asp Gln Ile Ala Leu Leu Lys Ala  
 35 40 45  
  
 Ser Thr Ile Glu Ile Met Leu Leu Glu Thr Ala Arg Arg Tyr Asn His  
 50 55 60  
  
 Glu Thr Glu Cys Ile Thr Phe Leu Lys Asp Phe Thr Tyr Ser Lys Asp  
 65 70 75 80  
  
 Asp Phe His Arg Ala Gly Leu Gln Val Glu Phe Ile Asn Pro Ile Phe

85

90

95

Glu Phe Ser Arg Ala Met Arg Arg Leu Gly Leu Asp Asp Ala Glu Tyr  
 100 105 110

Ala Leu Leu Ile Ala Ile Asn Ile Phe Ser Ala Asp Arg Pro Asn Val  
 115 120 125

Gln Glu Pro Gly Arg Val Glu Ala Leu Gln Gln Pro Tyr Val Glu Ala  
 130 135 140

Leu Leu Ser Tyr Thr Arg Ile Lys Arg Pro Gln Asp Gln Leu Arg Phe  
 145 150 155 160

Pro Arg Met Leu Met Lys Leu Val Ser Leu Arg Thr Leu Ser Ser Val  
 165 170 175

His Ser Glu Gln Val Phe Ala Leu Arg Leu Gln Asp Lys Lys Leu Pro  
 180 185 190

Pro Leu Leu Ser Glu Ile Trp Asp Val Ala  
 195 200

<210> 6

<211> 241

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
 construct

<400> 6

Leu Thr Ala Ala Gln Glu Leu Met Ile Gln Gln Leu Val Ala Ala Gln  
 1 5 10 15

Leu Gln Cys Asn Lys Arg Ser Phe Ser Asp Gln Pro Lys Val Thr Pro  
 20 25 30

Trp Pro Leu Gly Ala Asp Pro Gln Ser Ala Asp Ala Arg Gln Gln Arg  
 35 40 45

Phe Ala His Phe Thr Glu Leu Ala Ile Ile Ser Val Gln Glu Ile Val  
 50 55 60

Asp Phe Ala Lys Gln Val Pro Gly Phe Leu Gln Leu Gly Arg Glu Asp  
 65 70 75 80

Gln Ile Ala Leu Leu Lys Ala Ser Thr Ile Glu Ile Met Leu Leu Glu  
 85 90 95

Thr Ala Arg Arg Tyr Asn His Glu Thr Glu Cys Ile Thr Phe Leu Lys  
 100 105 110

Asp Phe Thr Tyr Ser Lys Asp Asp Phe His Arg Ala Gly Leu Gln Val  
 115 120 125



Glu Phe Ile Asn Pro Ile Phe Glu Phe Ser Arg Ala Met Arg Arg Leu  
130 135 140

Gly Leu Asp Asp Ala Glu Tyr Ala Leu Leu Ile Ala Ile Asn Ile Phe  
145 150 155 160

Ser Ala Asp Arg Pro Asn Val Gln Glu Pro Gly Arg Val Glu Ala Leu  
165 170 175

Gln Gln Pro Tyr Val Glu Ala Leu Leu Ser Tyr Thr Arg Ile Lys Arg  
180 185 190

Pro Gln Asp Gln Leu Arg Phe Pro Arg Met Leu Met Lys Leu Val Ser  
195 200 205

Leu Arg Thr Leu Ser Ser Val His Ser Glu Gln Val Phe Ala Leu Arg  
210 215 220

Leu Gln Asp Lys Lys Leu Pro Pro Leu Leu Ser Glu Ile Trp Asp Val  
225 230 235 240

Ala

<210> 7

<211> 33

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
construct

<400> 7

Leu Thr Ala Ala Gln Glu Leu Met Ile Gln Gln Leu Val Ala Ala Gln  
1 5 10 15

Leu Gln Cys Asn Lys Arg Ser Phe Ser Asp Gln Pro Lys Val Thr Pro  
20 25 30

Trp

<210> 8

<211> 175

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
construct

<400> 8

Arg Gln Gln Arg Phe Ala His Phe Thr Glu Leu Ala Ile Ile Ser Val

|   |     |     |     |
|---|-----|-----|-----|
| 1   | 5   | 10  | 15  |
| Gln Glu Ile Val Asp Phe Ala Lys Gln Val Pro Gly Phe Leu Gln Leu |     |     |     |
| 20  | 25  | 30  |     |
| Gly Arg Glu Asp Gln Ile Ala Leu Leu Lys Ala Ser Thr Ile Glu Ile |     |     |     |
| 35  | 40  | 45  |     |
| Met Leu Leu Glu Thr Ala Arg Arg Tyr Asn His Glu Thr Glu Cys Ile |     |     |     |
| 50  | 55  | 60  |     |
| Thr Phe Leu Lys Asp Phe Thr Tyr Ser Lys Asp Asp Phe His Arg Ala |     |     |     |
| 65  | 70  | 75  | 80  |
| Gly Leu Gln Val Glu Phe Ile Asn Pro Ile Phe Glu Phe Ser Arg Ala |     |     |     |
| 85  | 90  | 95  |     |
| Met Arg Arg Leu Gly Leu Asp Asp Ala Glu Tyr Ala Leu Leu Ile Ala |     |     |     |
| 100   | 105 | 110 |     |
| Ile Asn Ile Phe Ser Ala Asp Arg Pro Asn Val Gln Glu Pro Gly Arg |     |     |     |
| 115   | 120 | 125 |     |
| Val Glu Ala Leu Gln Gln Pro Tyr Val Glu Ala Leu Leu Ser Tyr Thr |     |     |     |
| 130   | 135 | 140 |     |
| Arg Ile Lys Arg Pro Gln Asp Gln Leu Arg Phe Pro Arg Met Leu Met |     |     |     |
| 145   | 150 | 155 | 160 |
| Lys Leu Val Ser Leu Arg Thr Leu Ser Ser Val His Ser Glu Gln     |     |     |     |
| 165   | 170 | 175 |     |

<210> 9

<211> 25

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
construct

<400> 9

|   |
|---|
| Leu Thr Ala Ala Gln Glu Leu Met Ile Gln Gln Leu Val Ala Ala Gln |
| 1 5 10 15   |

|                                     |
|-------------------------------------|
| Leu Gln Cys Asn Lys Arg Ser Phe Ser |
| 20 25                               |

<210> 10

<211> 7

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic

construct

<400> 10

Lys Val Thr Pro Trp Pro Leu  
1 5

<210> 11

<211> 182

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
construct

<400> 11

Ala Arg Gln Gln Arg Phe Ala His Phe Thr Glu Leu Ala Ile Ile Ser  
1 5 10 15

Val Gln Glu Ile Val Asp Phe Ala Lys Gln Val Pro Gly Phe Leu Gln  
20 25 30

Leu Gly Arg Glu Asp Gln Ile Ala Leu Leu Lys Ala Ser Thr Ile Glu  
35 40 45

Ile Met Leu Leu Glu Thr Ala Arg Arg Tyr Asn His Glu Thr Glu Cys  
50 55 60

Ile Thr Phe Leu Lys Asp Phe Thr Tyr Ser Lys Asp Asp Phe His Arg  
65 70 75 80

Ala Gly Leu Gln Val Glu Phe Ile Asn Pro Ile Phe Glu Phe Ser Arg  
85 90 95

Ala Met Arg Arg Leu Gly Leu Asp Asp Ala Glu Tyr Ala Leu Leu Ile  
100 105 110

Ala Ile Asn Ile Phe Ser Ala Asp Arg Pro Asn Val Gln Glu Pro Gly  
115 120 125

Arg Val Glu Ala Leu Gln Gln Pro Tyr Val Glu Ala Leu Leu Ser Tyr  
130 135 140

Thr Arg Ile Lys Arg Pro Gln Asp Gln Leu Arg Phe Pro Arg Met Leu  
145 150 155 160

Met Lys Leu Val Ser Leu Arg Thr Leu Ser Ser Val His Ser Glu Gln  
165 170 175

Val Phe Ala Leu Arg Leu  
180

<210> 12

<211> 13

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
construct

<400> 12

Lys Leu Pro Pro Leu Leu Ser Glu Ile Trp Asp Val Ala  
1 5 10

<210> 13

<211> 34

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
construct

<400> 13

Leu Thr Ala Ala Gln Glu Leu Met Ile Gln Gln Leu Val Ala Ala Gln  
1 5 10 15

Leu Gln Cys Asn Lys Arg Ser Phe Ser Asp Gln Pro Lys Val Thr Pro  
20 25 30

Trp Pro

<210> 14

<211> 198

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
construct

<400> 14

Ala Asp Ala Arg Gln Gln Arg Phe Ala His Phe Thr Glu Leu Ala Ile  
1 5 10 15

Ile Ser Val Gln Glu Ile Val Asp Phe Ala Lys Gln Val Pro Gly Phe  
20 25 30

Leu Gln Leu Gly Arg Glu Asp Gln Ile Ala Leu Leu Lys Ala Ser Thr  
35 40 45

Ile Glu Ile Met Leu Leu Glu Thr Ala Arg Arg Tyr Asn His Glu Thr  
50 55 60

Glu Cys Ile Thr Phe Leu Lys Asp Phe Thr Tyr Ser Lys Asp Asp Phe  
65 70 75 80

His Arg Ala Gly Leu Gln Val Glu Phe Ile Asn Pro Ile Phe Glu Phe

85

90

95

Ser Arg Ala Met Arg Arg Leu Gly Leu Asp Asp Ala Glu Tyr Ala Leu  
100 105 110

Leu Ile Ala Ile Asn Ile Phe Ser Ala Asp Arg Pro Asn Val Gln Glu  
115 120 125

Pro Gly Arg Val Glu Ala Leu Gln Gln Pro Tyr Val Glu Ala Leu Leu  
130 135 140

Ser Tyr Thr Arg Ile Lys Arg Pro Gln Asp Gln Leu Arg Phe Pro Arg  
145 150 155 160

Met Leu Met Lys Leu Val Ser Leu Arg Thr Leu Ser Ser V